

CLAIMS

1. A method of assessing speech quality transmitted via a packet based telecommunications network comprising the steps of:
  - storing a sequence of intercepted packets associated with a call, each packet containing speech data, and an indication of a transmission time of said packet;
  - storing with each intercepted packet an indication of an intercept time of said packet;
  - extracting a set of parameters from said sequence of packets; and
  - generating an estimated mean opinion score in dependence upon said set of parameters;characterised in that the extracting step comprises the sub steps of:
  - generating a jitter parameter for each of a sequence of stored packets in dependence upon the difference between the transmission time of a stored packet and the transmission time of a preceding stored packet of the sequence; and the difference between the intercept time of said stored packet and the intercept time of said preceding packet;
  - generating a long term average jitter parameter for said stored packet in dependence upon the value of said jitter parameter for said stored packet and the value of said jitter parameter for any preceding

stored packets; and  
generating a differential jitter parameter in  
dependence upon the jitter parameter and the long  
term average jitter differential parameter.

5

2. A method according to claim 1, in which the  
extracting step further comprises the sub step of  
determining a maximum value of said differential  
jitter parameter for a sequence of stored packets.

10

3. A method according to claim 1, in which the  
extracting step further comprises the sub step of  
determining a variance value of said differential  
jitter parameter for a sequence of stored packets.

15

4. A method according to claim 2 in which the extracting  
step further comprises the sub step of  
determining an average for a sequence of said maximum  
values.

20

5. A method according to claim 3 in which the extracting  
step further comprises the sub step of  
determining an average for a sequence of said maximum  
values.

25

6. A method according to claim 3, in which the  
extracting step further comprises the sub step of  
determining an average for a sequence of said  
variance values.

30

7. A computer readable medium carrying a computer program for implementing the method according to claim 1.

8. A computer program for implementing the method  
5 according to claim 1.

9. An apparatus for assessing speech quality transmitted via a packet based telecommunications network comprising the steps of:

10 means for storing a sequence of intercepted packets associated with a call, each packet containing  
speech data, and  
an indication of a transmission time of said packet;

15 means for storing with each intercepted packet an indication of an intercept time of said packet;  
means for extracting a set of parameters from said sequence of packets; and  
means for generating an estimated mean opinion score  
20 in dependence upon said set of parameters;

characterised in that the means for extracting further comprises:

means for generating a jitter parameter for each of a sequence of stored packets in dependence upon  
25 the difference between the transmission time of a stored packet and the transmission time of a preceding stored packet of the sequence; and  
the difference between the intercept time of said stored packet and the intercept time of  
30 said preceding packet;

means for generating a long term average jitter  
parameter for said stored packet in dependence upon  
the value of said jitter parameter for said stored  
packet and the value of said jitter parameter for any  
5 preceding stored packets; and

means for generating a differential jitter parameter  
in dependence upon the jitter parameter and the long  
term jitter differential parameter.

10